Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of the Commission's Policies and Rules for Processing Applications in the Direct Broadcast Satellite Service	)	IB Docket No. 06-160

COMMENTS OF THE MVDDS 5G COALITION

The MVDDS 5G Coalition (the "Coalition") submits these comments in response to the Commission's Notice of Proposed Rulemaking ("NPRM")[1] to revise the FCC's procedures and rules governing direct broadcast satellite ("DBS") service using satellites in geostationary orbit ("GSO"). The Coalition includes a cross-section of Multichannel Video Distribution and Data Service ("MVDDS") and DBS licensees holding authorizations in the 12.2-12.7 GHz band ("12 GHz Band").[2]

I. INTRODUCTION

The Coalition welcomes the Commission's interest in streamlining the DBS licensing and service rules in the 12 GHz Band. Updating the DBS rules, however, should be but one component of a larger strategy to modernize the 12 GHz Band. The Coalition is encouraged by

[1] *Amendment of the Commission's Policies and Rules for Processing Applications in the Direct Broadcast Satellite Service*, Notice of Proposed Rulemaking, IB Dkt No. 06-160, FCC 18-157 (rel. Nov. 13, 2018) ("NPRM").

[2] The Coalition's members are the following MVDDS license holders: Cass Cable TV, Inc., DISH Network L.L.C. ("DISH"), GO LONG WIRELESS, LTD., MDS Operations, Inc., MVD Number 53 Partners, Satellite Receivers, Ltd., SOUTH.COM LLC, Story Communications, LLC, and Vision Broadband, LLC. The Coalition therefore is a party-in-interest under Section 309(d)(1) of the Communications Act of 1934, as amended. *See* 47 U.S.C. § 309(d)(1).

the NPRM's request for comment on other in-band operations, because piecemeal reform will not be an enduring way to promote the highest and best use of the 12 GHz Band. [3]

Holistically modernizing the 12 GHz Band requires, among other things, evaluating how to license spectrum to maximize the video and connectivity choices available to consumers. DBS providers typically offer pay-television services using a combination of direct broadcast satellite systems in the 12 GHz band and Fixed Satellite Service systems in the 11.7-12.2 GHz band or "Ku-band." And while satellite pay-television services in the 12 GHz Band remain an important component of the consumer video experience, the Commission should consider potential future need for DBS allocations. At a minimum, the Commission should not overlook the well-documented evidence of increasing demand for wireless services and the need to identify suitable candidate bands for 5G. Thus, any rule reforms designed to increase DBS use of the 12 GHz Band should be undertaken with an eye to balancing other beneficial uses of the spectrum for two-way wireless services.

Fortunately, the Commission can balance the twin objectives of promoting DBS and next-generation services. This proceeding gives the Commission an opportunity to tackle all of these interrelated issues comprehensively by initiating a Notice of Proposed Rulemaking in response to the Coalition's Petition (filed in 2016) to allow two-way terrestrial services in the 12 GHz Band and resolving the DBS NPRM in view of the Coalition's Petition.[4]

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[3] *See* NPRM ¶ 34.

[4] *See* Petition of MVDDS 5G Coalition for Rulemaking, RM-11768 (filed Apr. 26, 2016) ("5G Petition").

II. THE COMMISSION CAN HOLISTICALLY MODERNIZE THE 12 GHZ BAND BY WEIGHING THE NEED FOR MORE DBS SERVICES RELATIVE TO OTHER POTENTIAL USES.

In 2000, the Commission authorized MVDDS on a co-primary, non-harmful interference basis in the 12 GHz Band, and it established "very conservative" technical requirements to protect DBS.[5] The Commission also prohibited MVDDS licensees from using the spectrum for two-way communications. These technical and operational limitations have deterred manufacturers from developing equipment for the band, and the Commission has twice extended the buildout milestone for MVDDS licensees.[6] As a result, MVDDS spectrum today remains underutilized despite significant wireless services demand and substantial investments by MVDDS licensees, and its future is hamstrung by outdated technical and operational rules. Meanwhile, even though non-geostationary orbit fixed-satellite services ("NGSO FSS") enjoy a primary downlink allocation in the 12 GHz Band, these "services" have yet to deployed in the band.

The historic issues afflicting the 12 GHz Band counsel in favor of treading carefully in this proceeding. As an initial matter, the Commission should examine whether there is an increasing demand for DBS that justifies more DBS deployments in the 12 GHz Band before adopting the proposals in the NPRM. Recent developments cast doubt on whether such an

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[5] *Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band with Frequency Range*, Memorandum Opinion and Order and Second Report and Order, 17 FCC Rcd 9614, 9631 ¶ 43 (2002).

[6] *See, e.g.*, *Requests of Ten Licensees of 191 Licenses in the Multichannel Video and Data Distribution Service for Waiver of the Five-Year Deadline for Providing Substantial Service, Order*, 25 FCC Rcd 10097, 10103 ¶ 11 (WTB 2010).

assumption would be true. On November 29, 2018, for example, AT&T announced in a presentation to analysts that "[w]e've launched our last satellite."[7] Randall Stephenson, AT&T's CEO, said that the company is essentially "done" with satellite as it focuses on over-the-top ("OTT") video distribution.[8] In addition, programming offered over the Internet has become more prevalent and consumers are spending an increasing amount of time accessing video content through mobile devices.

Nonetheless, DBS remains an important service; one member of the Coalition (DISH) remains a significant DBS licensee. The relevant issue is whether dedicating more resources to DBS represents a solution to a *bona fide* problem that exists today. Protecting and promoting DBS should not (and need not) come at the expense of allowing other productive uses of the 12 GHz Band. If new DBS operations occur before future MVDDS deployments (including two-way services) materialize, then MVDDS operators could have stranded investments due to the need to mitigate interference. The Commission can and should look to promote DBS without stranding potential investments in MVDDS or next-generation two-way 5G services.

III. PROMOTING TWO-WAY WIRELESS SERVICES ALSO REPRESENTS A COMPELLING WAY TO USE THE 12 GHZ BAND MORE INTENSIVELY

Although the Commission still must evaluate the need for more DBS operations before adopting the proposals in the NPRM, the need for 5G-ready spectrum is beyond dispute.[9]

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[7] Caleb Henry, *DirecTV owner AT&T says it's done buying satellites*, Space News (Dec. 4, 2018), https://spacenews.com/directv-owner-att-says-its-done-buying-satellites/.

[8] *Id.*

[9] *See, e.g.*, *Expanding Flexible Use of the 3.7 to 4.2 GHz Band, GN Docket No. 18-222; Petition for Rulemaking to Amend and Modernize Parts 25 and 101, RM-11791; Fixed Wireless Communications Coalition, Request for Modified Coordination Procedures*, Order and Notice of Proposed Rulemaking, GN Docket Nos. 18-122, at ¶ 3 (rel. July 13, 2018) ("Additional spectrum

Cisco's latest *Visual Networking Index*, released in November 2018, projects that machine-to-machine ("M2M") connections will be more than half of the global connected devices and connections by 2022.[10] The share of M2M connections will grow from 34 percent in 2017 to 51 percent by 2022.[11] There will be 14.6 billion M2M connections by 2022.[12] Cisco also projects that smartphone traffic will soon exceed PC traffic. In 2018, PCs accounted for 41 percent of total IP traffic, but by 2022 PCs will account for only 19 percent of IP traffic. Smartphones will account for 44 percent of total IP traffic by 2022, up from 18 percent in 2017.[13]

Despite the need for more spectrum to support two-way, 5G services, the Commission's rules have prohibited these services in the 12 GHz Band. Prohibiting two-way services, meanwhile, has unnecessarily frustrated MVDDS licensees from using the 12 GHz Band to its fullest potential. The two biggest impediments in the current rules include: (1) limiting MVDDS terrestrial service to fixed service; and (2) requiring providers to use non-MVDDS spectrum for bi-directional service.

That is why, more than two years ago, the Coalition filed a Petition urging the Commission to issue a Notice of Proposed Rulemaking to release an additional 500 megahertz of spectrum in the 12 GHz band for 5G. The Petition asks the Commission to provide incumbents

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must be identified, however, if we are to seize the 5G future and meet the connectivity needs of all Americans.").

[10] Cisco Visual Networking Index: Forecast and Trends, 2017-2022 White Paper, at 1, https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white-paper-c11-741490.pdf

[11] *Id.*

[12] *Id.* at 6.

[13] *Id.*

the same regulatory flexibility that it has already provided to flexible-use licensees in other bands, by revising Section 101.1407 of the Commission's rules to allow licensees "to provide any terrestrial fixed or mobile services for which its frequency bands are allocated."[14] It also asks that the Commission to allow 5G services while protecting DBS from harmful interference.

As the Commission looks to modernize DBS operations in the 12 GHz band, it should at least consider the Coalition's Petition in tandem. Two-way terrestrial services in the 12 GHz Band should not threaten current DBS services. Tom Peters, the former Chief Engineer of the Wireless Telecommunications Bureau, has demonstrated in a series of exhaustive technical studies filed in the record that DBS can coexist with terrestrial 5G use.[15] Coexistence between terrestrial mobile 5G services and DBS is possible by carefully designing a network that meets the current EPFD limits from both base stations and mobile devices. Moreover, the Coalition has urged DBS to remain co-primary in the band, with 5G operators bearing the responsibility to ensure that the conservative EPFD levels are met and that interference to DBS does not occur.[16]

Considering the benefits of two-way wireless services in the 12 GHz Band alongside the NPRM would ensure that the Commission develops a durable set of rules going forward. The

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[14] 5G Petition at 18.

[15] *See* Tom Peters, *MVDDS 12.2-12.7 GHz Co-Primary Service Coexistence*, at 35 (June 8, 2016), *available at* Attachment I to Comments of MVDDS 5G Coalition, RM-11768 (June 8, 2016) (finding that "coexistence between MVDDS 5G operations and DBS receivers is possible with modest adjustments to MVDDS site locations and radiofrequency design parameters."); Tom Peters, *MVDDS 12.2-12.7 GHz Co-Primary Service Coexistence II* (June 23, 2016), *available at* Attachment I to Reply Comments of MVDDS 5G Coalition, RM-11768 (June 23, 2016) (revalidating the original coexistence study in different topological use-cases); Tom Peters, *MVDDS 12.2-12.7 GHz NGSO Coexistence Study* (Aug. 15, 2016), *available at* Attachment I of Petition to Deny of MVDDS 5G Coalition, RM-11768, et al. (Aug. 15, 2016).

[16] *See, e.g.*, 5G Petition at 16 ("[The Commission] should ensure that it guards against harmful interference to incumbent DBS services and mitigates interference among MVDDS operators.").

Coalition has presented more than enough information to justify a timely rulemaking. It submitted several coexistence studies demonstrating the feasibility of terrestrial mobile 5G services in the 12 GHz Band in rural areas, urban canyons, and other unique geographic conditions. And no party has put forth any meaningful technical data challenging the extensive engineering analysis that the Coalition presented. Initiating a rulemaking on the Coalition's Petition would allow the Commission to review the relative need for 5G and DBS together, so as to maximize both services in the band.

IV. CONCLUSION

Instead of narrowly focusing on the DBS-centric issues in the NPRM, the Commission should take a broader view of the entire 12 GHz Band. Even though DBS remains an important component of video service delivery today, it does not necessarily follow that expanding DBS services to the exclusion of two-way 5G services is in the public interest. For these reasons, the Coalition urges the Commission to consider the Coalition's 5G Petition alongside the NPRM and adopt a harmonized set of rules that strike the appropriate balance among competing uses.

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Respectfully submitted,

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